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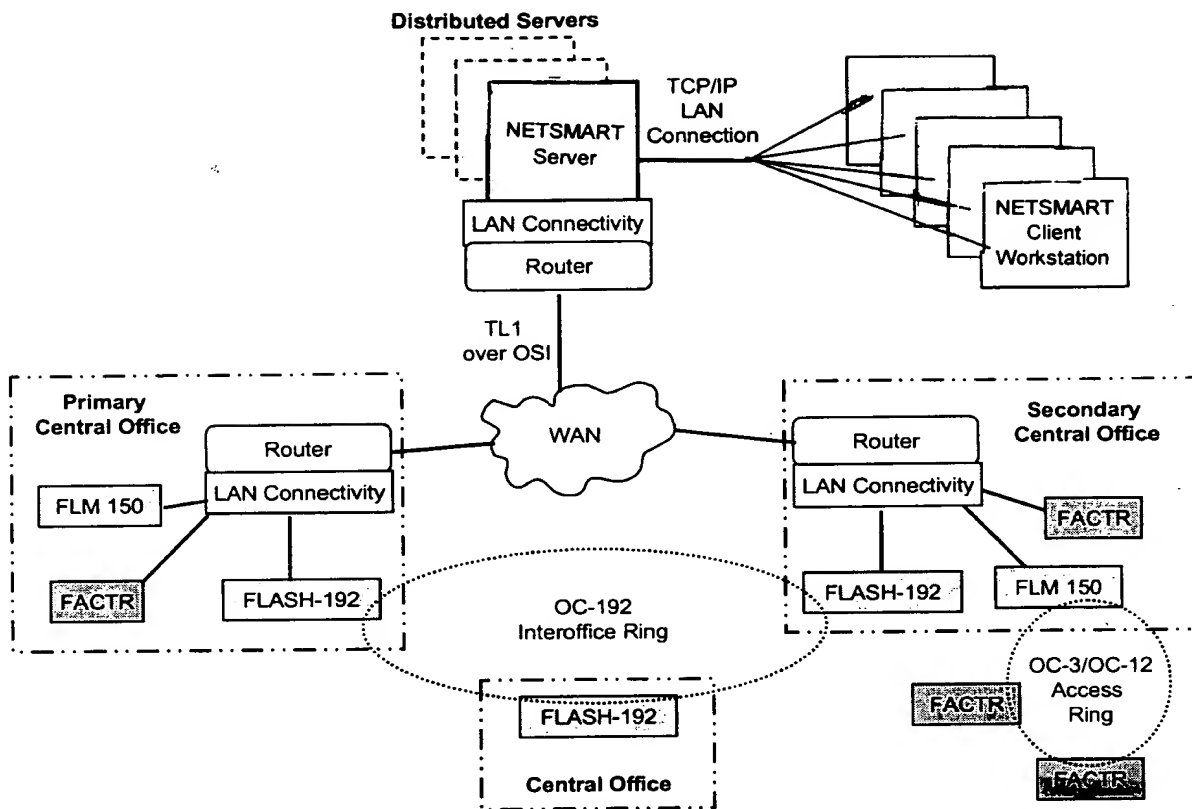


Figure 1

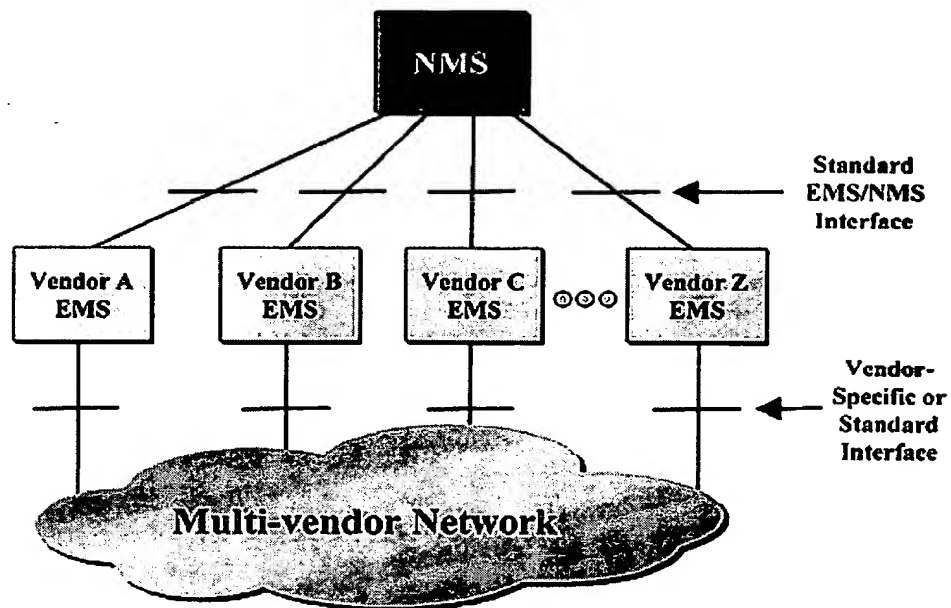


Figure 1A
Prior Art

005250-01508560

BML- Manage the overall business,
e.g., achieving return on investment, market
share, employee satisfaction, community
and governmental goals.

SML- Manage the services offered to customers,
e.g., meeting customer service levels,
service quality, cost and
time-to-market objectives.

NML- Manage the network and systems that
deliver those services, e.g., capacity,
diversity, and congestion.

EML- Manage the elements comprising
the networks and systems.

NEL- Switches, transmission,
distribution systems, etc...

Business Management Layer

Service Management Layer

Network Management Layer

Network Element Management Layer

Network Element Layer

Figure 1B
Prior Art

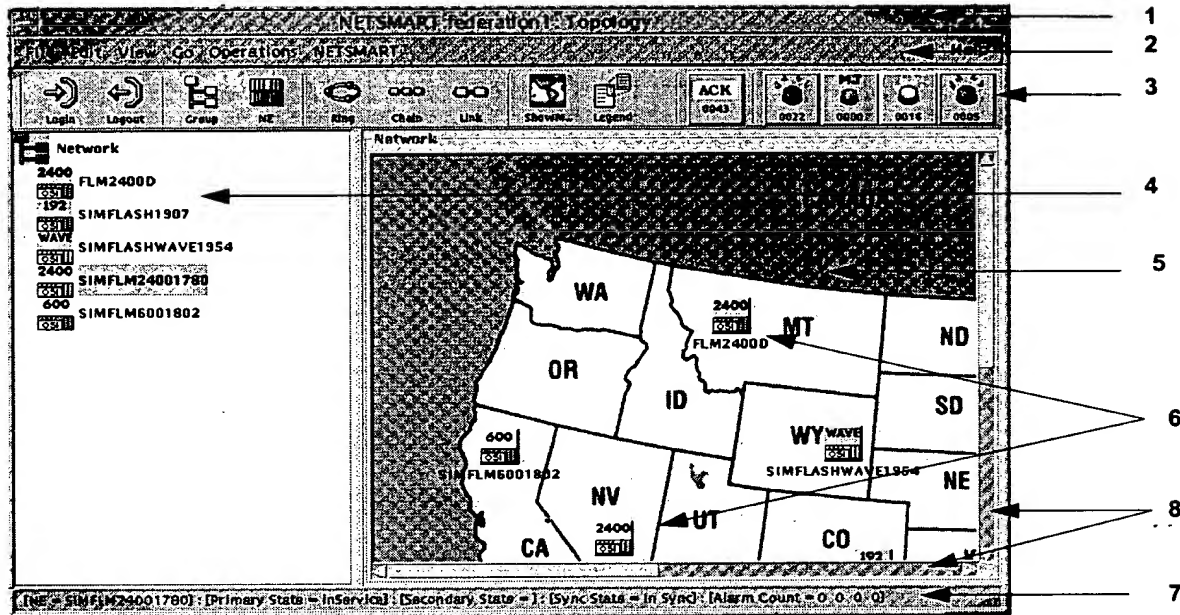


Figure 2

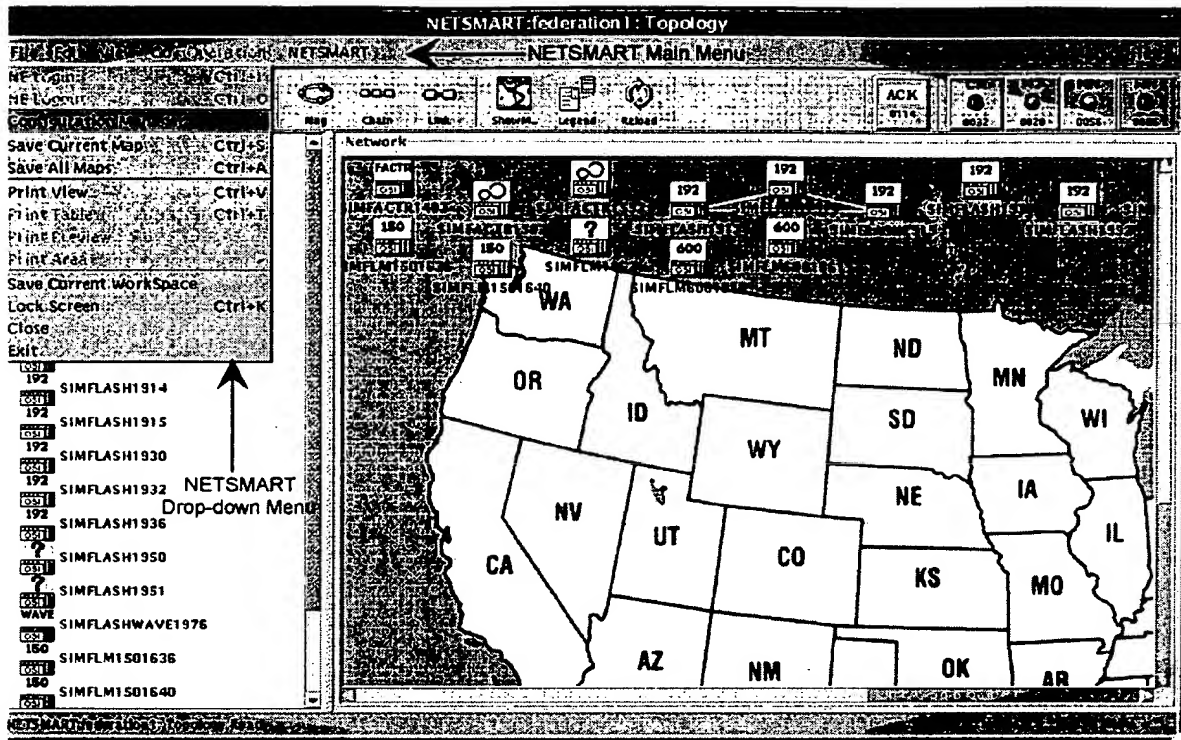


Figure 3

005250-01508560

Filter

Field	Test	Value	Logic
(none)	(none)	Text/Data Entry Field	AND
(none)	(none)		AND
Wavelength (nm)	(none)		AND
Frequency (THz)	(none)		AND
Transponder or 10G Port #	(none)		AND
AID	(none)		AND
Status	(none)		AND
OCN WLR (nm)	(none)		AND
OCN OPR (dbm)	(none)		AND
WCH OPT (dbm)	(none)		AND
WDM OPR (dbm)	(none)		AND
WDM OPT (dbm)	(none)		AND
(none)	(none)		AND
(none)	(none)		AND
(none)	(none)		AND

Drop-Down List

Ok Cancel Clear Help

Command Button

Figure 4

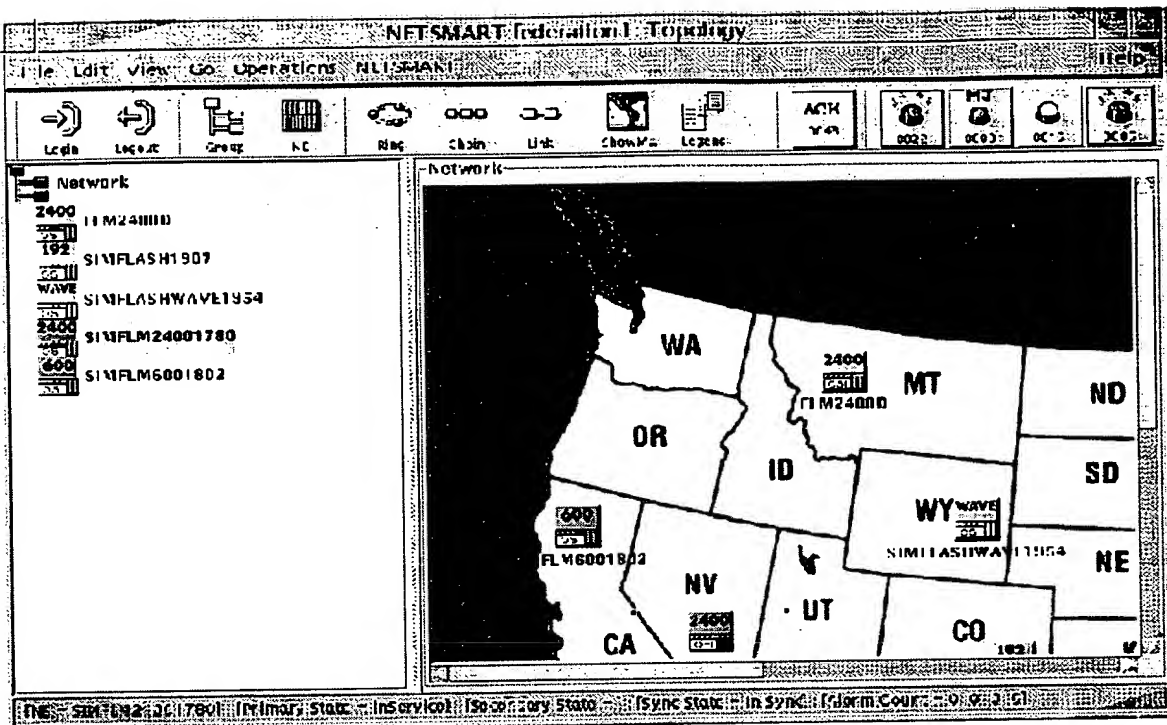


Figure 5

[illegible]

Figure 6

Add Link

Group 1: NE1:

Group 2: NE2:

Linkable Termination Ports

SIMFLASHWAVE1951

OCN	OS1-OCN-1	<input type="button" value="Tx"/> <input type="button" value="Rx"/>
OCN	OS1-OCN-11	<input type="button" value="Tx"/> <input type="button" value="Rx"/>
OCN	OS1-OCN-14	<input type="button" value="Tx"/> <input type="button" value="Rx"/>
OCN	OS1-OCN-15	<input type="button" value="Tx"/> <input type="button" value="Rx"/>
OCN	OS1-OCN-18	<input type="button" value="Tx"/> <input type="button" value="Rx"/>
OCN	OS1-OCN-2	<input type="button" value="Tx"/> <input type="button" value="Rx"/>

SIMFLASHWAVE1957

<input type="button" value="Rx"/> <input type="button" value="Tx"/>	OS1-OCN-1	OCN
<input type="button" value="Rx"/> <input type="button" value="Tx"/>	OS1-OCN-11	OCN
<input type="button" value="Rx"/> <input type="button" value="Tx"/>	OS1-OCN-14	OCN
<input type="button" value="Rx"/> <input type="button" value="Tx"/>	OS1-OCN-15	OCN
<input type="button" value="Rx"/> <input type="button" value="Tx"/>	OS1-OCN-18	OCN
<input type="button" value="Rx"/> <input type="button" value="Tx"/>	OS1-OCN-2	OCN

Undo:

Figure 7

0050519-052500

00550-6T502560

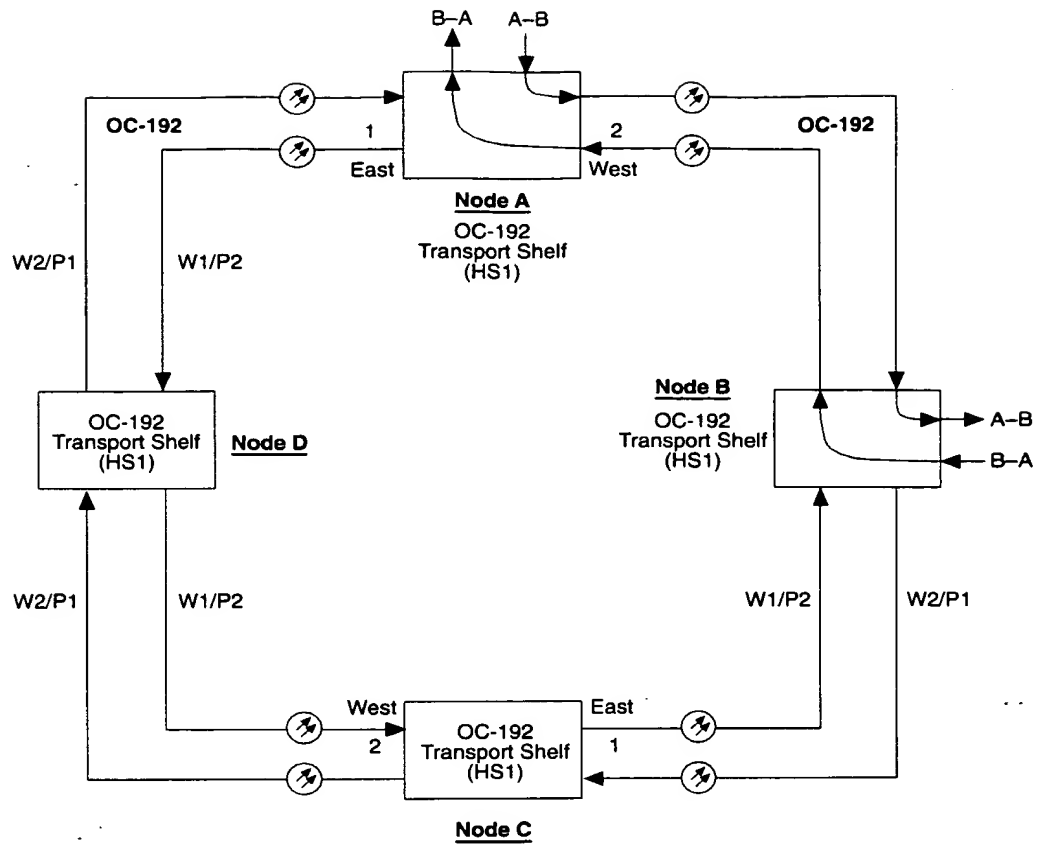


Figure 9

005051050000

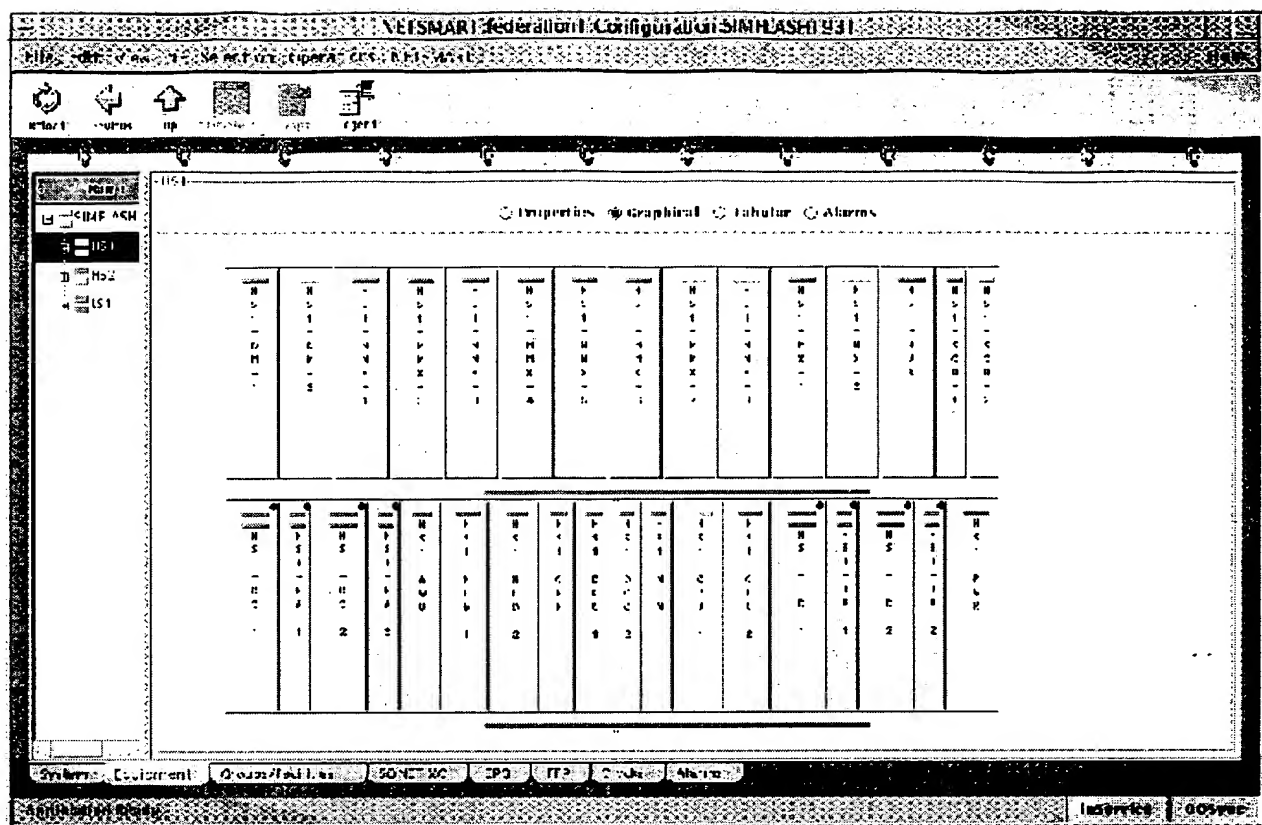


Figure 10

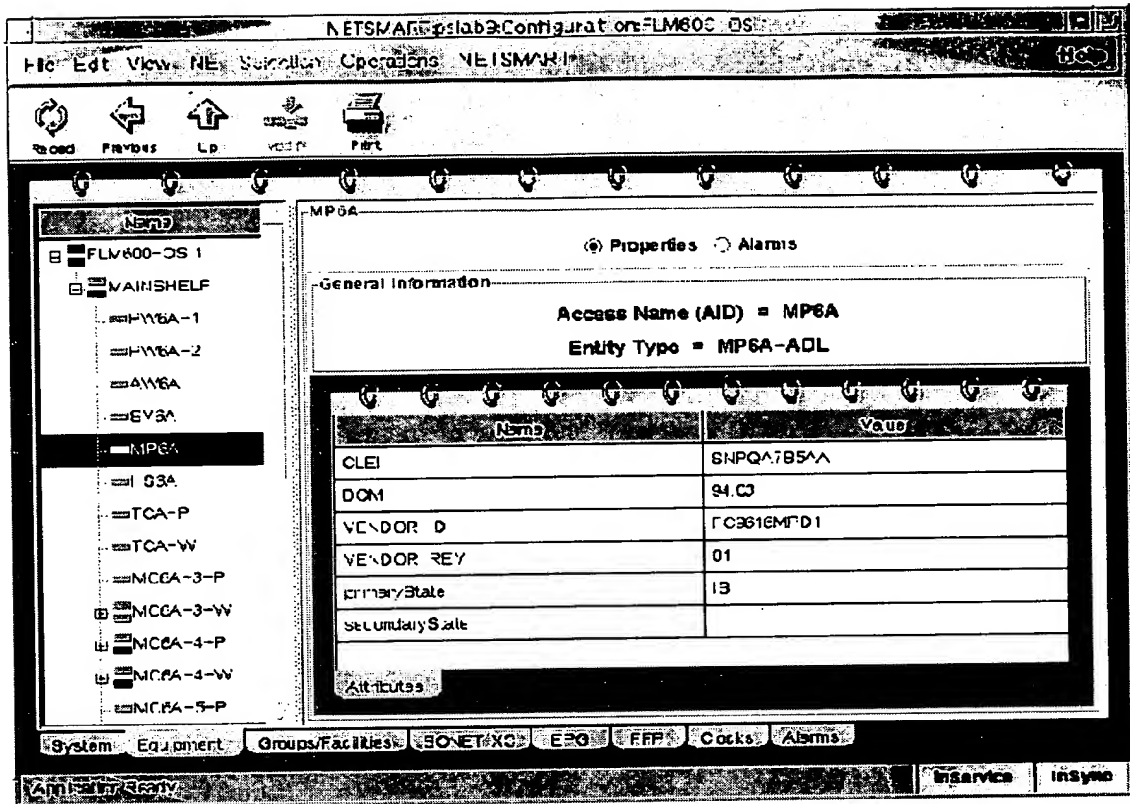


Figure 11

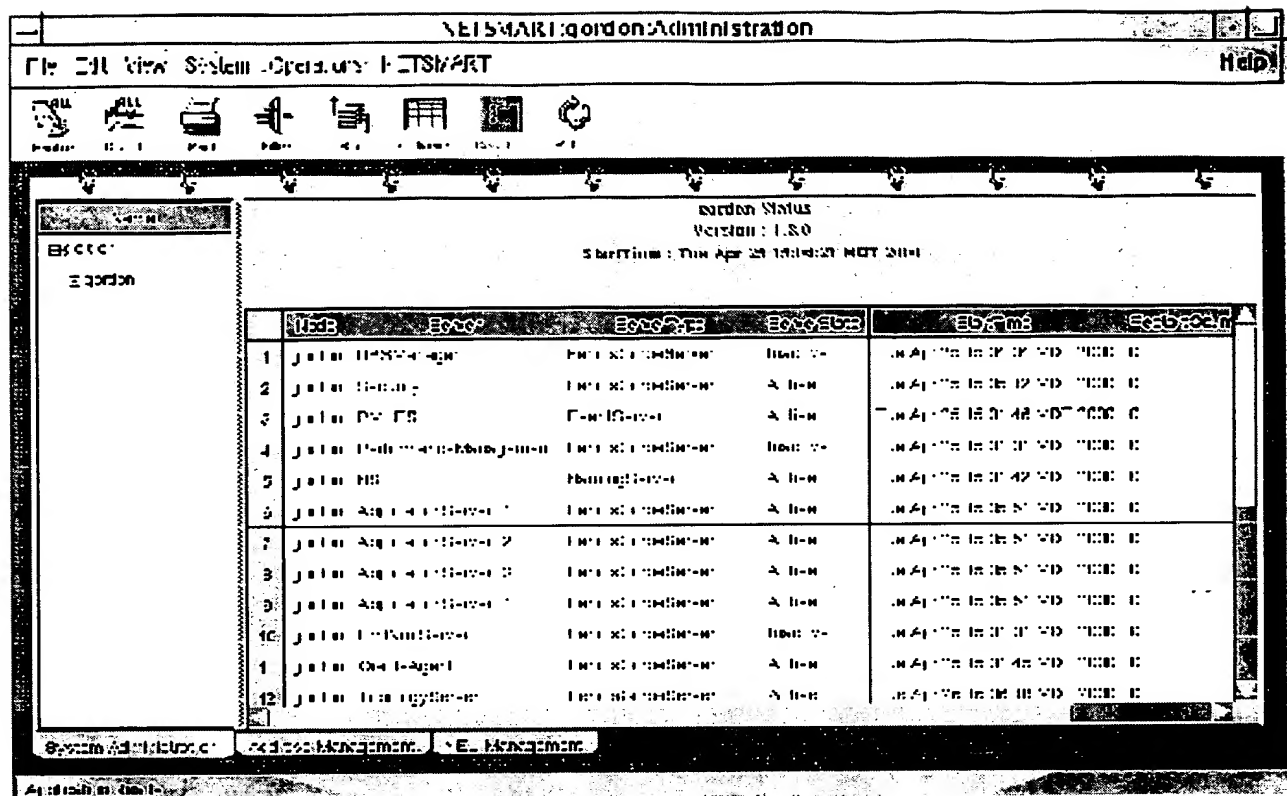


Figure 12

00500540-005000

NFTSMART International Administration			
le Edit View System Create File Help			
Address List - All			
TID	PROJECT	C# C# C# C#	ADDRESS
1	SIHF-VISIT	CS	11 MC 1000000000000000 12 12 1000000000
2	SIHF-VISIT	CS	3331(-3)X(((((X)))X((62379237(((((3554
3	SIHF-VISIT	CS	3331(-3)X(((((X)))X((62379237(((((3552
4	SIHF-VISIT	CS	11 MC 1000000000000000 12 12 1000000000
5	SIHF-VISIT	CS	11 MC 1000000000000000 12 12 1000000000
6	SIHF-VISIT	CS	3331(-3)X(((((X)))X((62379237(((((3714
7	SIHF-VISIT	CS	3331(-3)X(((((X)))X((62379237(((((3773
8	SIHF-VISIT	CS	11 MC 1000000000000000 12 12 1000000000
9	SIHF-VISIT	CS	11 MC 1000000000000000 12 12 1000000000
10	SIHF-VISIT	CS	3331(-3)X(((((X)))X((62379237(((((340
11	SIHF-VISIT	CS	3331(-3)X(((((X)))X((62379237(((((377
12	SIHF-VISIT	CS	11 MC 1000000000000000 12 12 1000000000
13	SIHF-VISIT	CS	11 MC 1000000000000000 12 12 1000000000
14	SIHF-VISIT	CS	3331(-3)X(((((X)))X((62379237(((((354
15	SIHF-VISIT	CS	3331(-3)X(((((X)))X((62379237(((((356
System: 1000000000000000 12 12 1000000000			
Address Management			

Figure 13

[illegible]

Figure 14

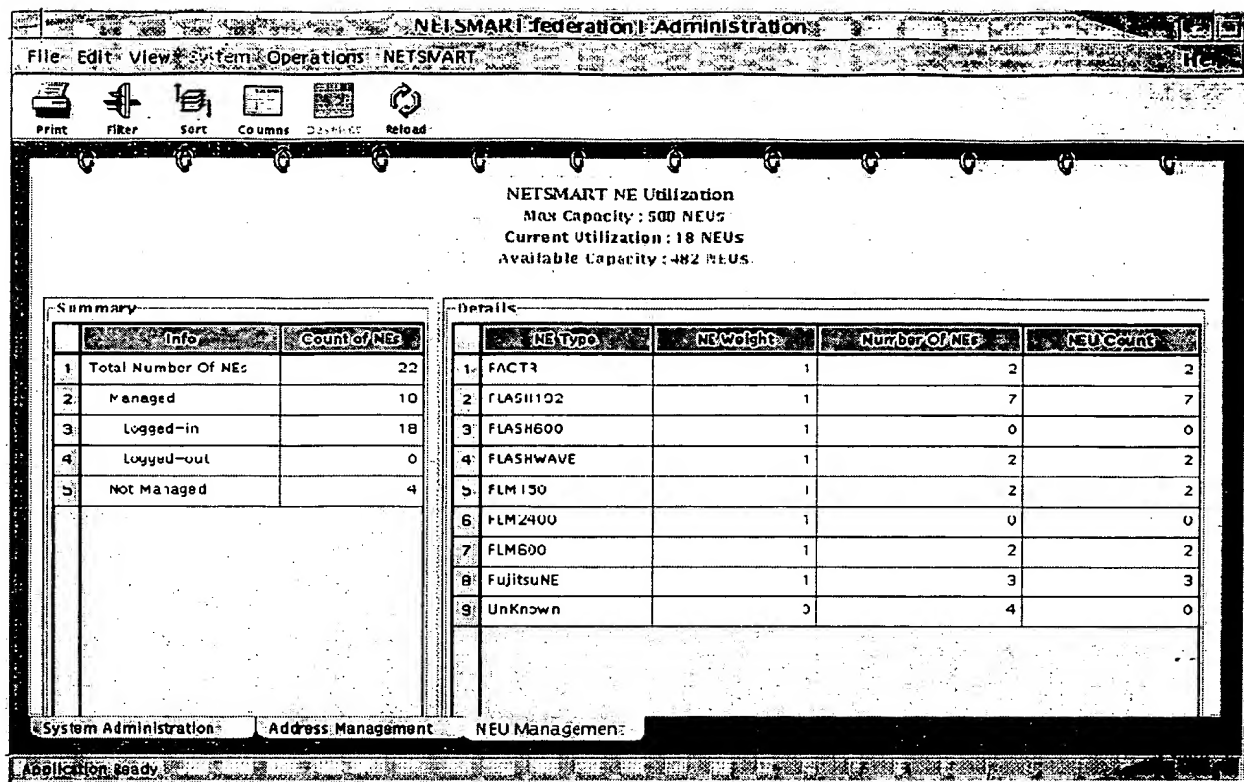


Figure 15

005250-0500

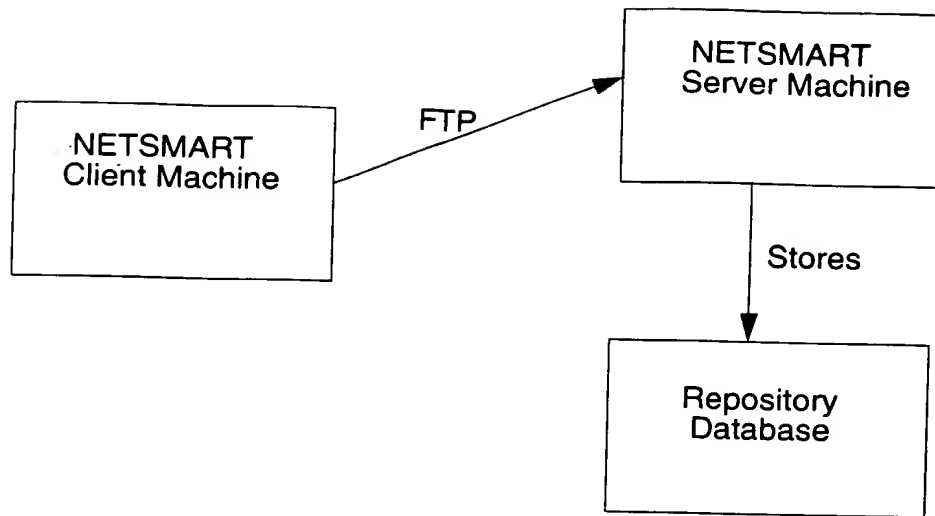


Figure 16

005250" 67508510

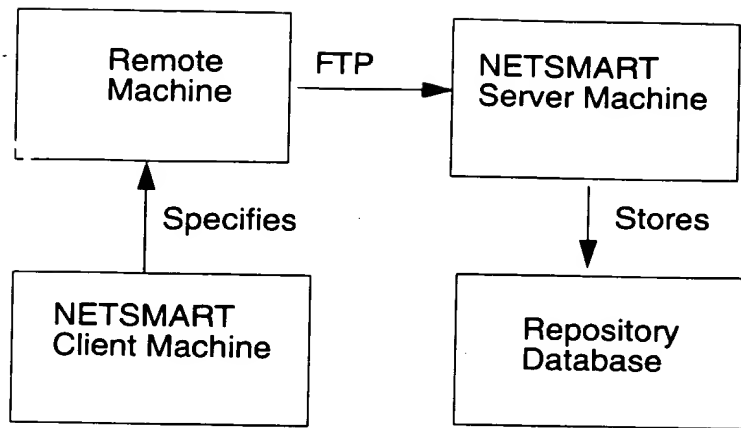


Figure 17

NETSMART: federation 1: Remote Memory Backup and Restore

File Edit View Operations NETSMART Help

Backup Restore AbortBackup AbortRestore Activate Cancel Commit Details Reload

VE Type	NE TID	Status	Progress
CPU 0	NE TID: 0000000000000000	Idle	

NETSMART: federation 1: Remote Memory Backup and Restore ready

Figure 18

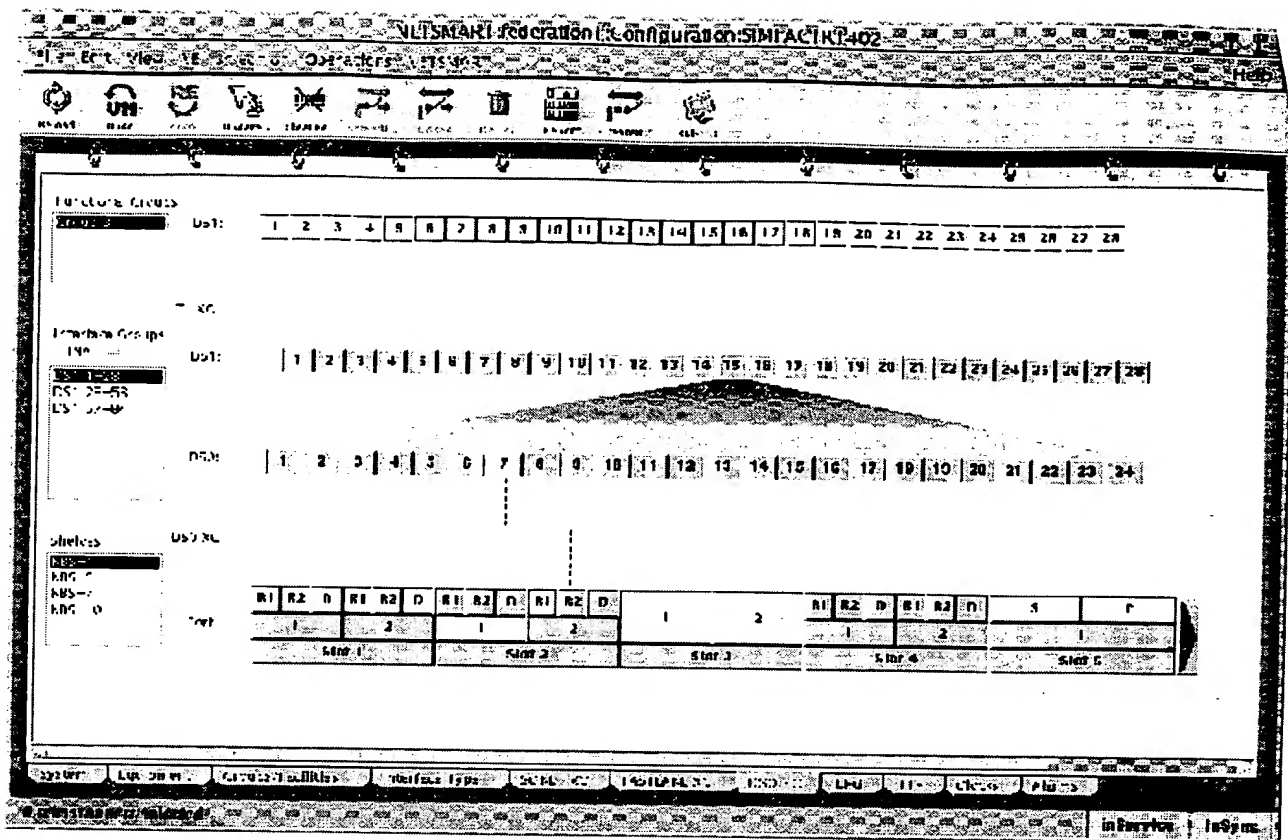


Figure 19

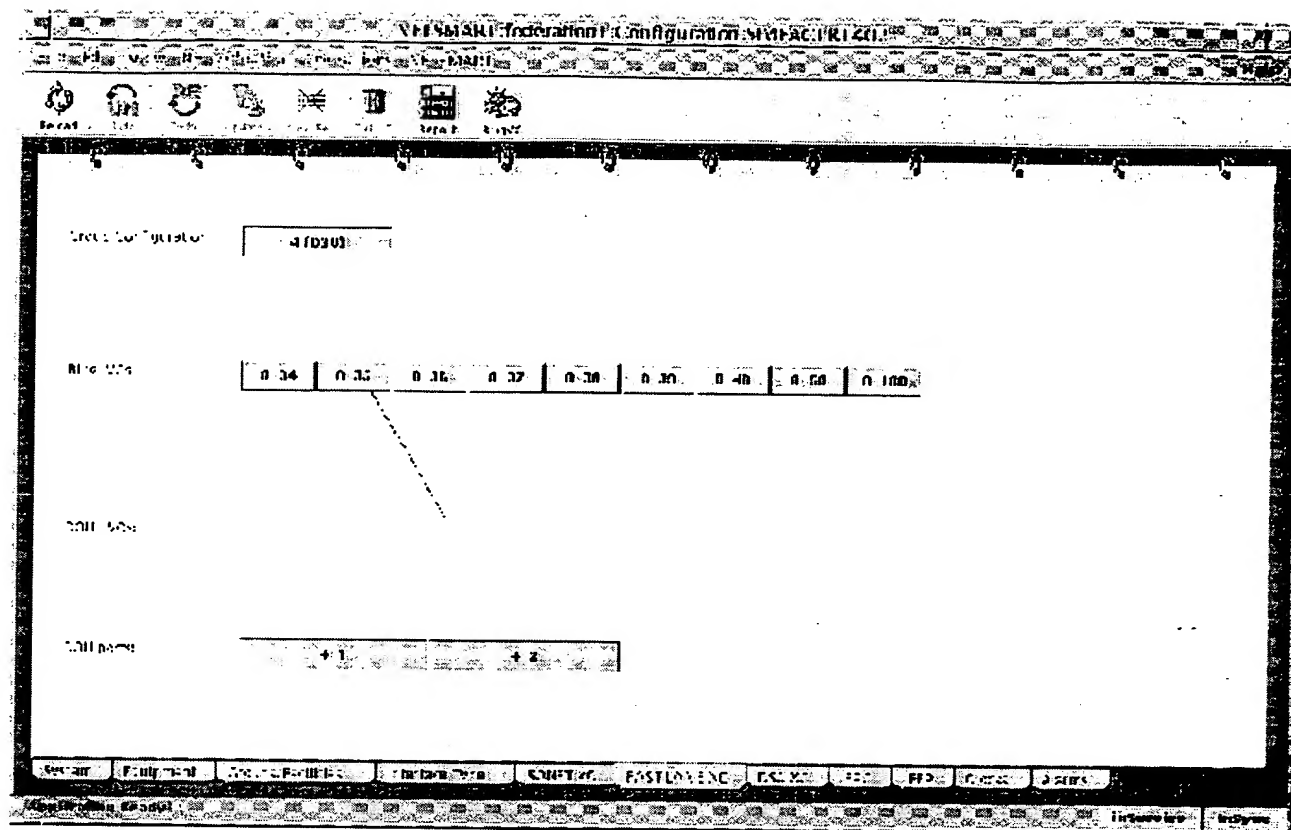


Figure 20

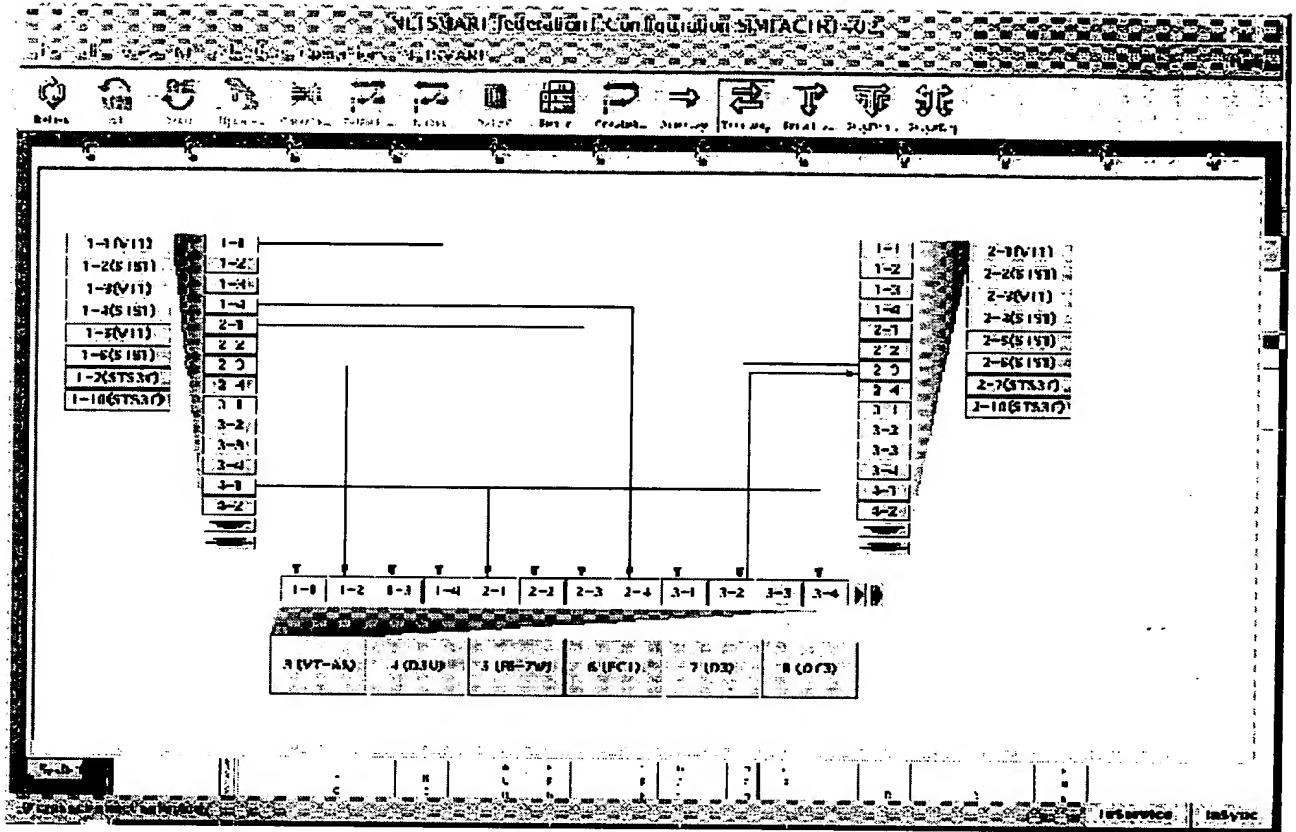


Figure 21

0050510-052500

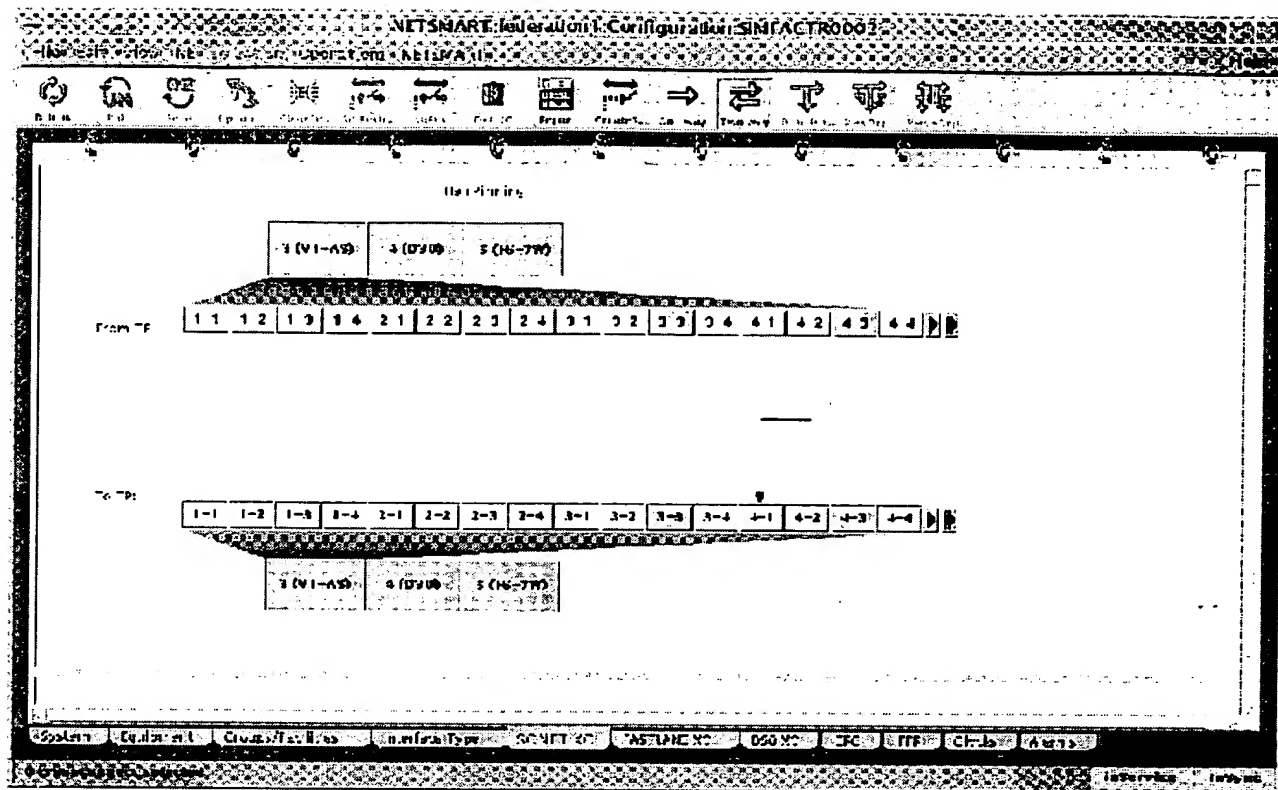


Figure 22

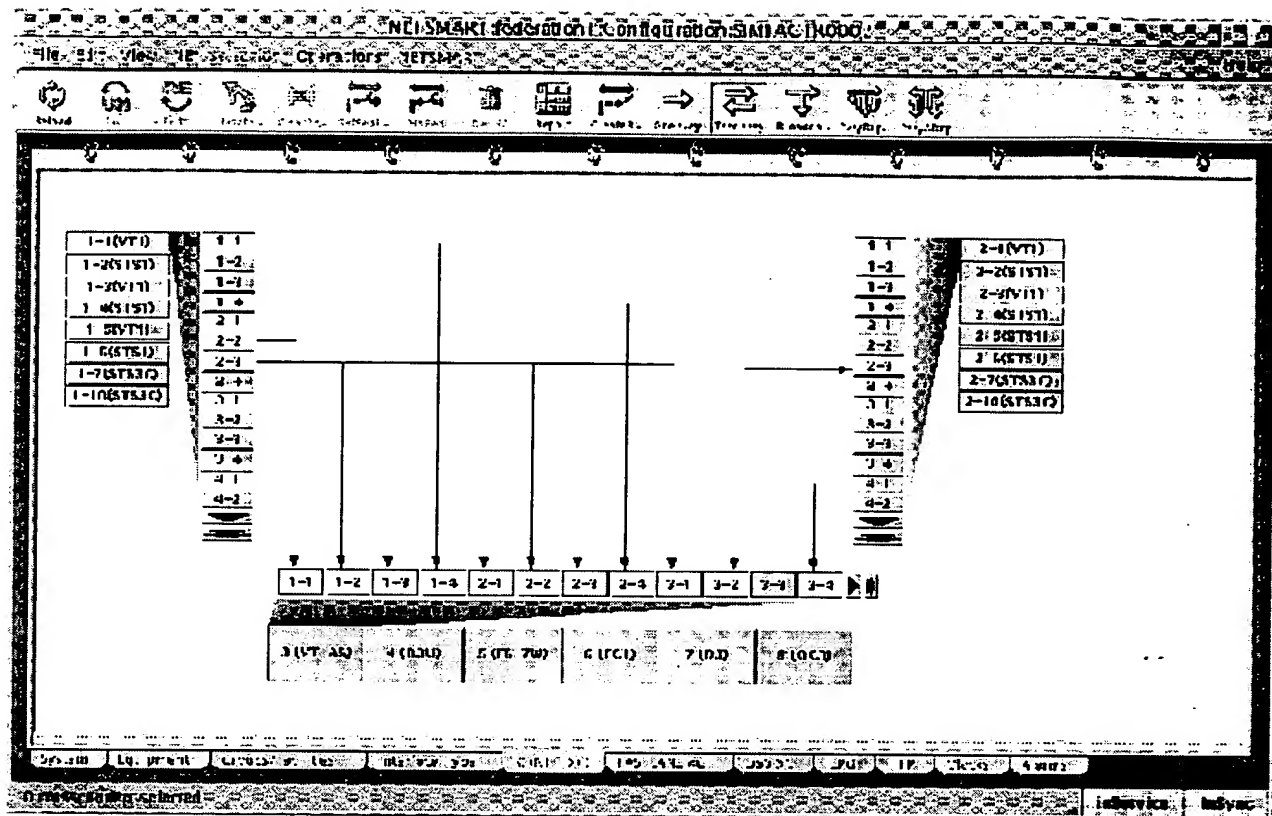


Figure 23







Crossconnect Report							
<div>  Print  Filter  Sort  Columns  Deselect  Reload </div>							
	From	To	Rate	Redline	Bridge	Crossconnect Name	Crossconnect Type
1	2-3-2-4	1-3-2-4	VT1	No			1WAY
2	1-3-1-1	2-3-1-1	VT1	No			1WAY
3	1-3-1-3	2-3-1-3	VT1	No			1WAY
4	1-3-2-4	2-3-2-4	VT1	No			1WAY
5	2-3-1-1	1-3-1-1	VT1	No			1WAY
6	2-3-1-3	1-3-1-3	VT1	No			1WAY
7	1-2	2-2	STS1	No			1WAY
8	2-2	1-2	STS1	No			1WAY
<div>Close Help</div>							

Figure 24

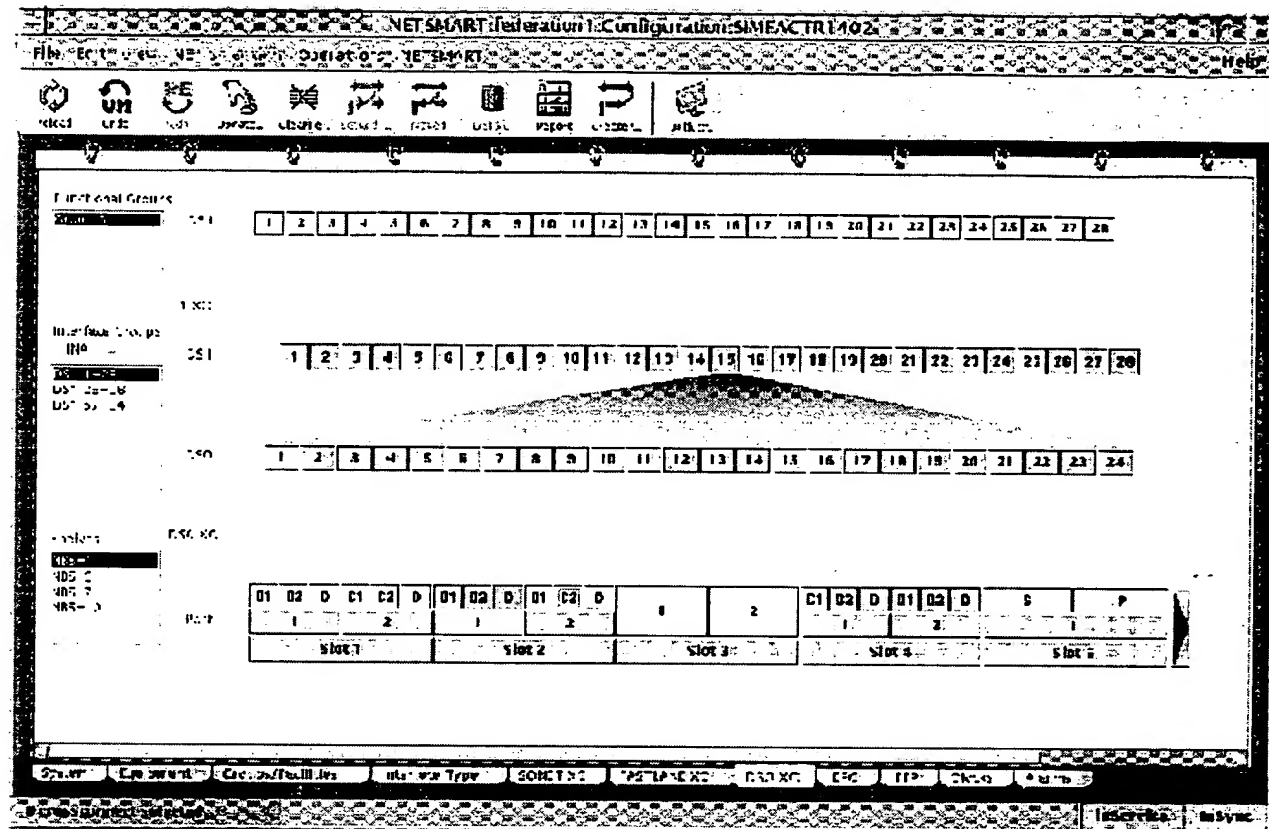


Figure 25

Managing Facilities

Close

OCN

OS1

Existing Facilities

OS1-OCN-1

OS1-OCN-2

OS1-OCN-3

OS1-OCN-5

OS1-OCN-6

OS1-OCN-8

OS1-OCN-9

OS1-OCN-11

OS1-OCN-14

OS1-OCN-15

OS1-OCN-16

Non-existing Facilities

OS1-OCN-4

OS1-OCN-7

OS1-OCN-10

OS1-OCN-12

OS1-OCN-13

OS1-OCN-17

OS1-OCN-18

OS1-OCN-19

OS1-OCN-20

OS1-OCN-21

OS1-OCN-22

Access Name (AID) - OS1-OCN-1

Entity Type - OCN

Name

Value

OPTADJ

+0.0

RATE

10G

primaryState

IS-NR

secondaryState

Attributes

Figure 26

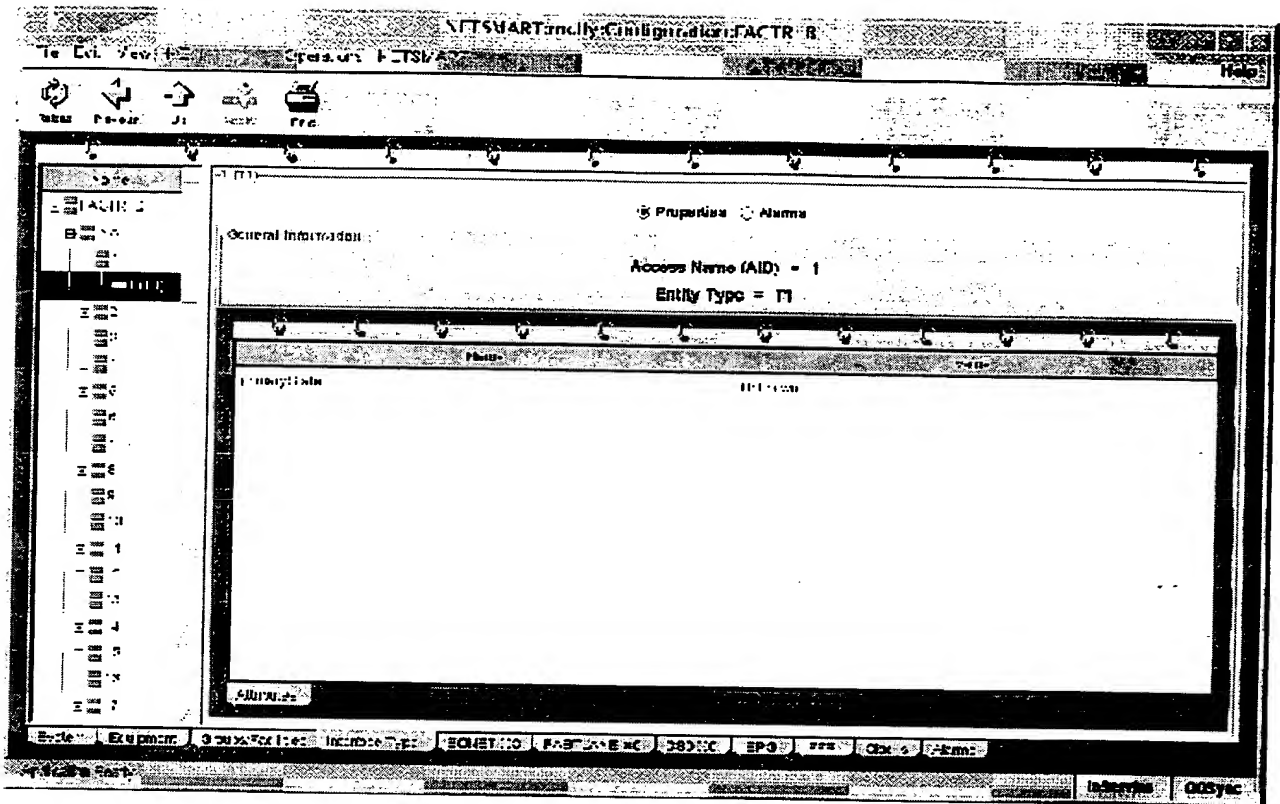


Figure 27

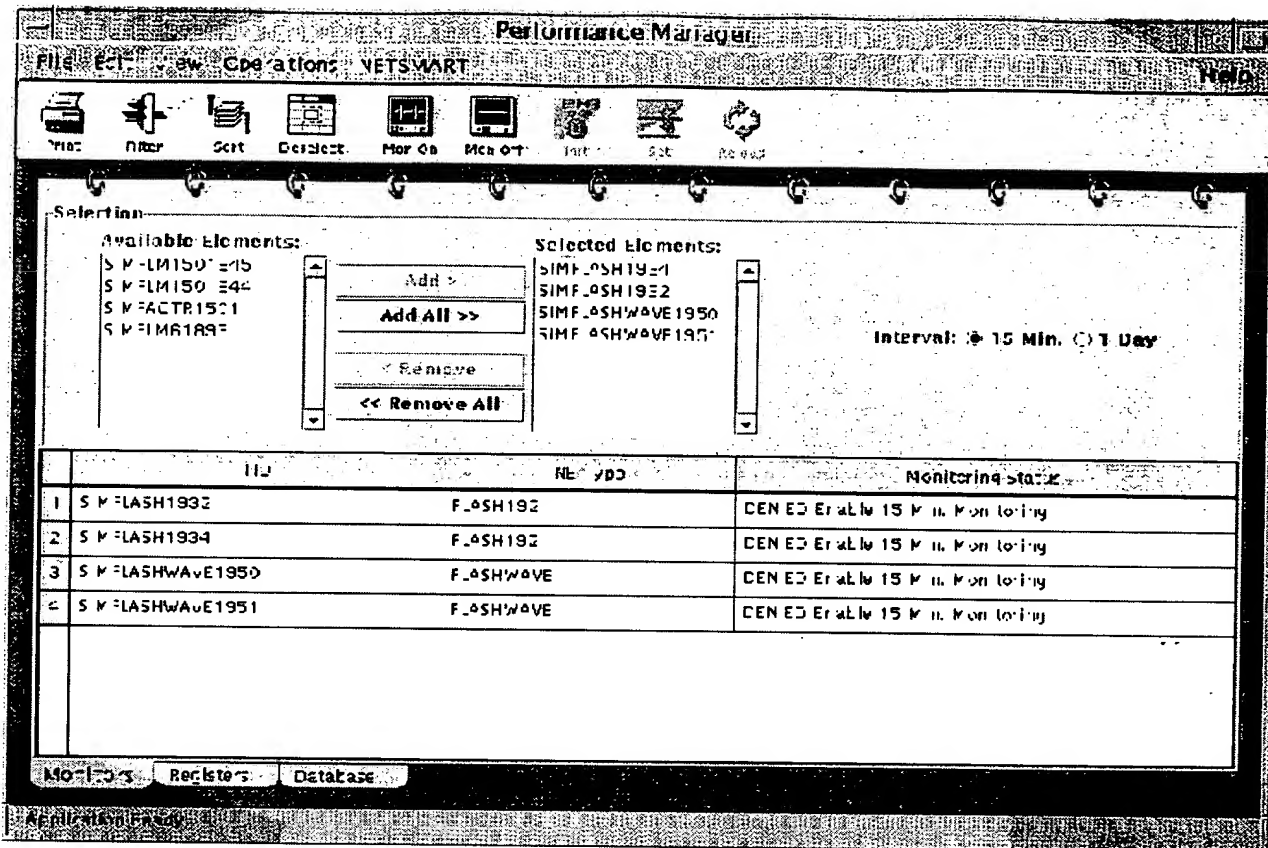


Figure 28

005250-67508500

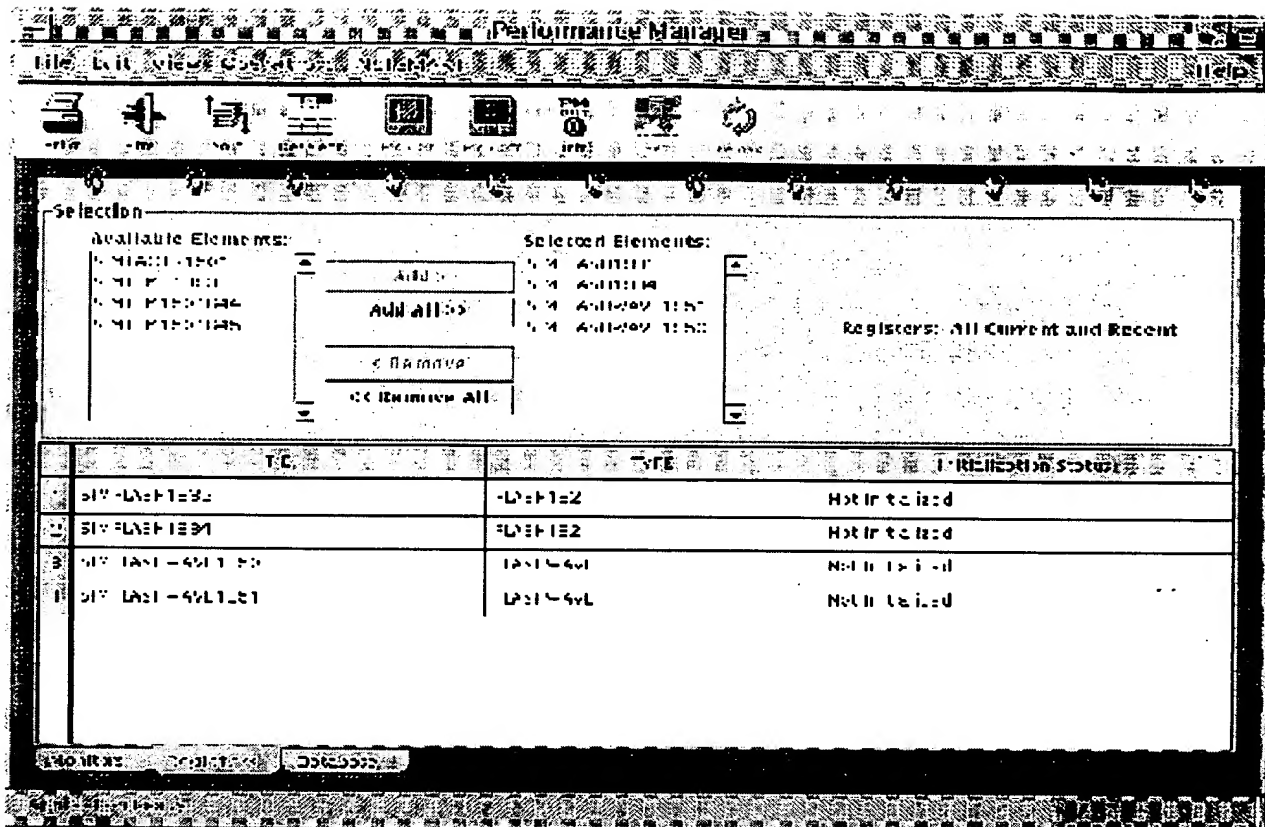


Figure 29

Performance Manager

File Edit View Options Help

File Edit View Options Help

Available Firmwares:

- SIM140-10501
- SIM140-1002
- SIM140-902
- SIM140-902
- SIM140-902
- SIM140-902
- SIM140-902
- SIM140-902
- SIM140-902
- SIM140-902

Selected Firmwares:

Interval: 10 Min. 1 Day

NMS Start Date: 1/1/00

NMS Start Time: 1:00 AM

NMS End Date: 1/2/00

NMS End Time: 1:00 AM

ID	NMS ID	NMS Name	NMS Type	NMS Status	NMS Location	NMS Description

Display Refresh Database

Figure 30

0050510-05000

HS1-HT2H-2

Close
Print
Help
Save
Display
Refresh
Find
Exit

Selection

Available Equipment:

Add

Add All

Remove

Remove All

Selected Equipment:

	NYS Time	NE Time	A DTYPE	AID	Register	Value	Range	Threshold
1	Fri Feb 11 14:58:35 EST 2000	Fri Feb 11 14:58:03 PST 2000	EQF	HS1-HT2H-2	IRCN	1.0	1.0-1.8	1.7
2	Fri Feb 11 14:58:35 EST 2000	Fri Feb 11 14:58:03 PST 2000	EQF	HS1-HT2H-2	IPTN	1.0	0.2-0.8	0.5

Monitors
Registers
Database

Figure 31

HSI-2 (OC192)

Close Print Refresh Help List Table Map Settings Exit

HSI-2 (OC192)

Selection

Available Facilities:

Add

Add All

Remove

Remove All

Selected Facilities:

Location: ☒ NEAD ☐ FEND ☐ NEND&FEND

Direction: ☒ Repetitive ☐ NA

Interval: ☒ 15 Min. ☐ 1 Day

Start Index:

End Index:

NMS Time	NE Time	AIDTYPE	AID	Register	Value	Range	Threshold	Default Threshold	Validity	Location	Direction

Navigation

Registers

Database

Figure 32

00550-0150860







Crossconnect Report							
<div>  Print  Filter  Sort  Columns  Deselect  Reload </div>							
	From	To	Rate	Redline	Bridge	Crossconnect Name	Crossconnect Type
1	2-3-2-4	1-3-2-4	VT1	No			1WAY
2	1-3-1-1	2-3-1-1	VT1	No			1WAY
3	1-3-1-3	2-3-1-3	VT1	No			1WAY
4	1-3-2-4	2-3-2-4	VT1	No			1WAY
5	2-3-1-1	1-3-1-1	VT1	No			1WAY
6	2-3-1-3	1-3-1-3	VT1	No			1WAY
7	1-2	2-2	STS1	No			1WAY
8	2-2	1-2	STS1	No			1WAY
<div>Close Help</div>							

Figure 33

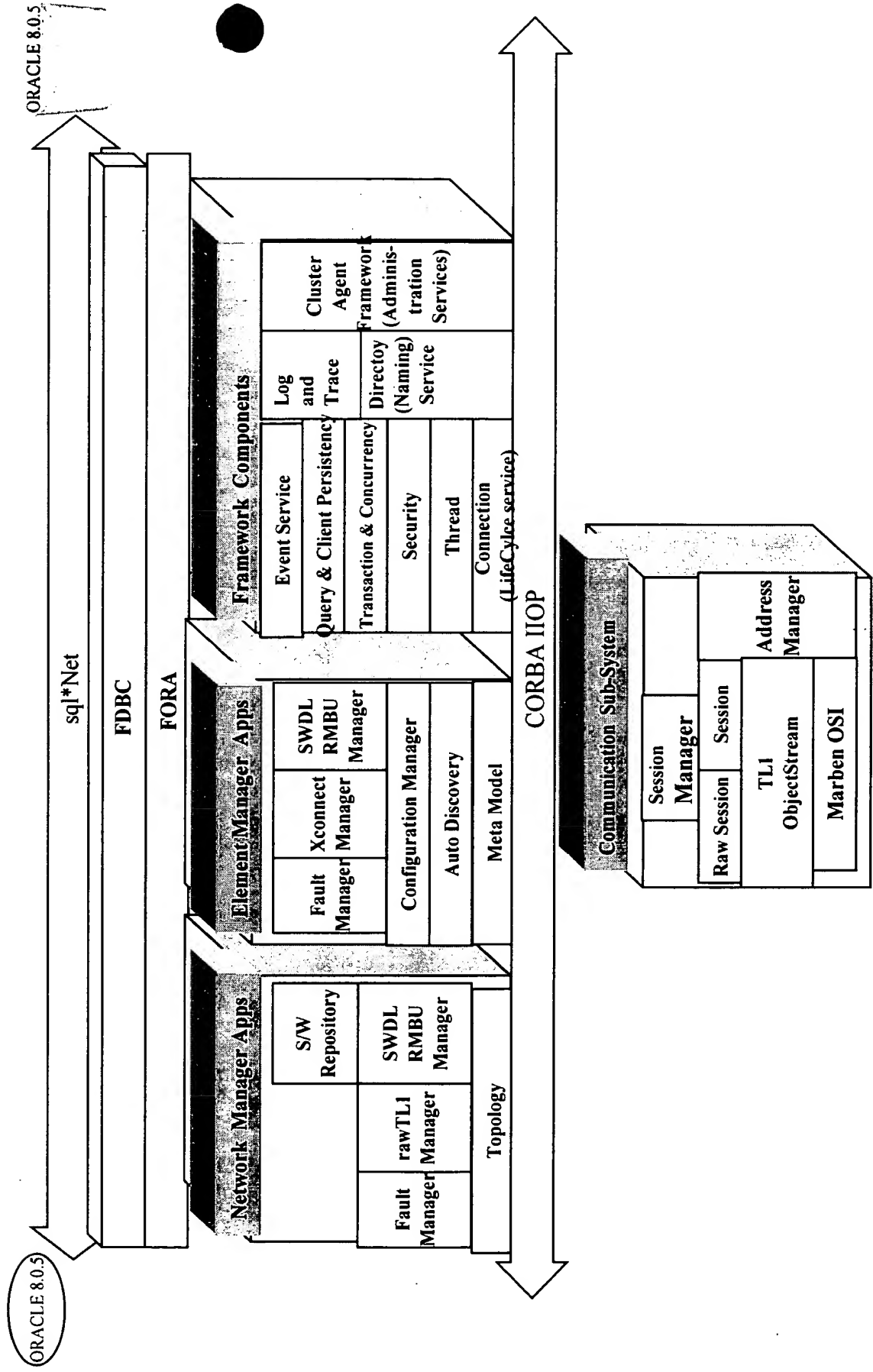


Figure 34

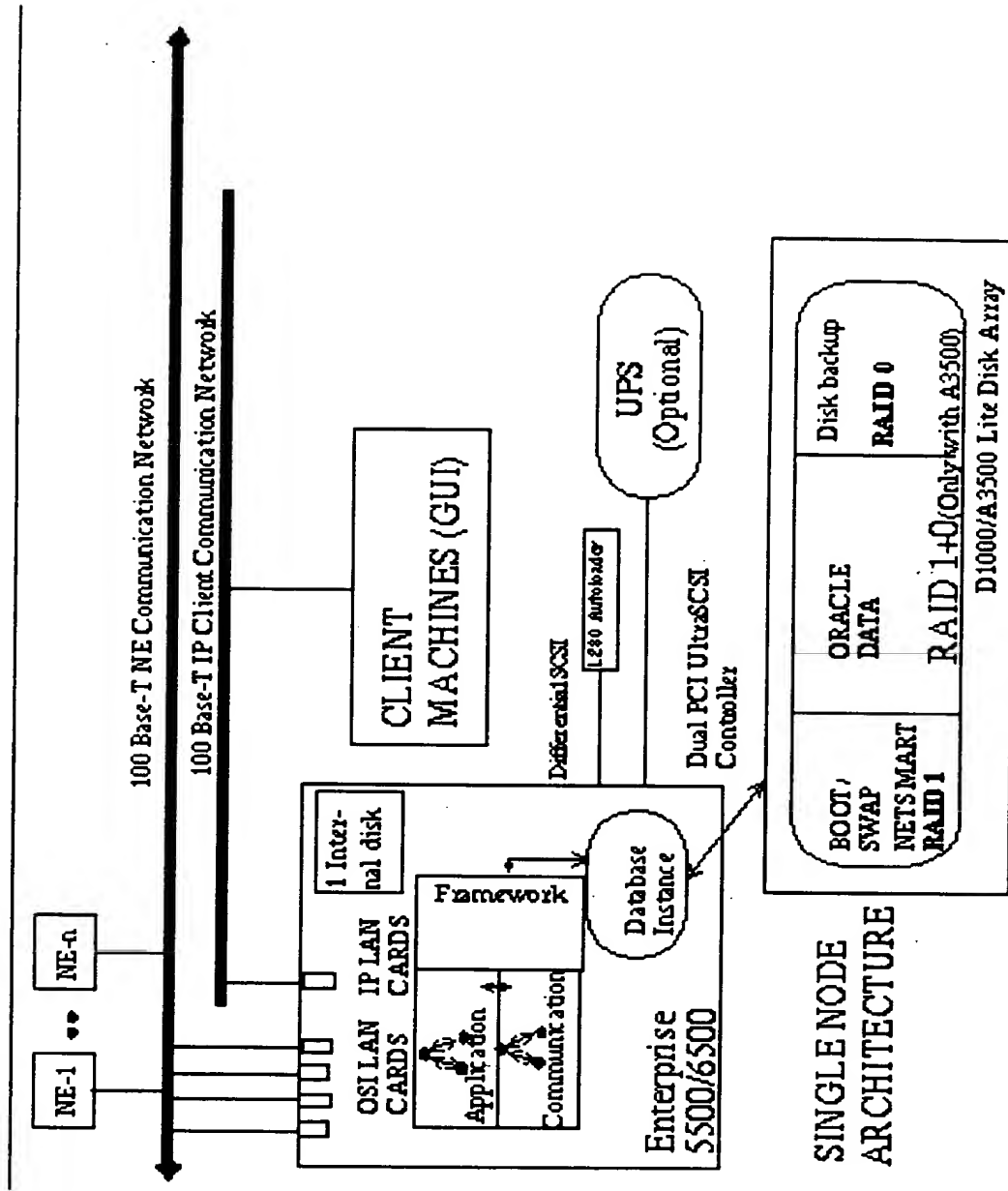


Figure 36

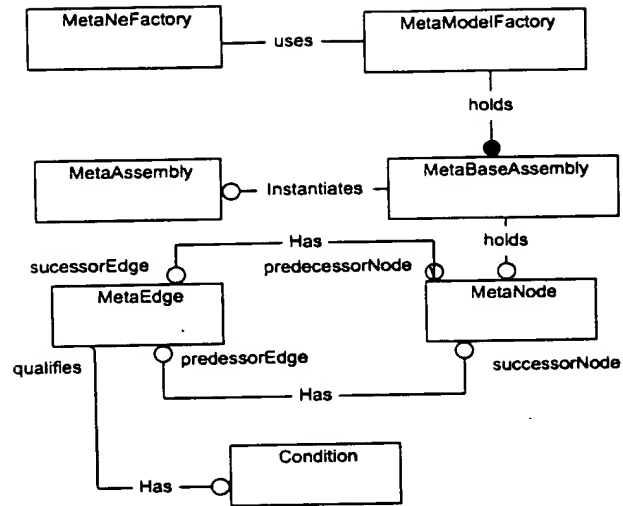


Figure 38

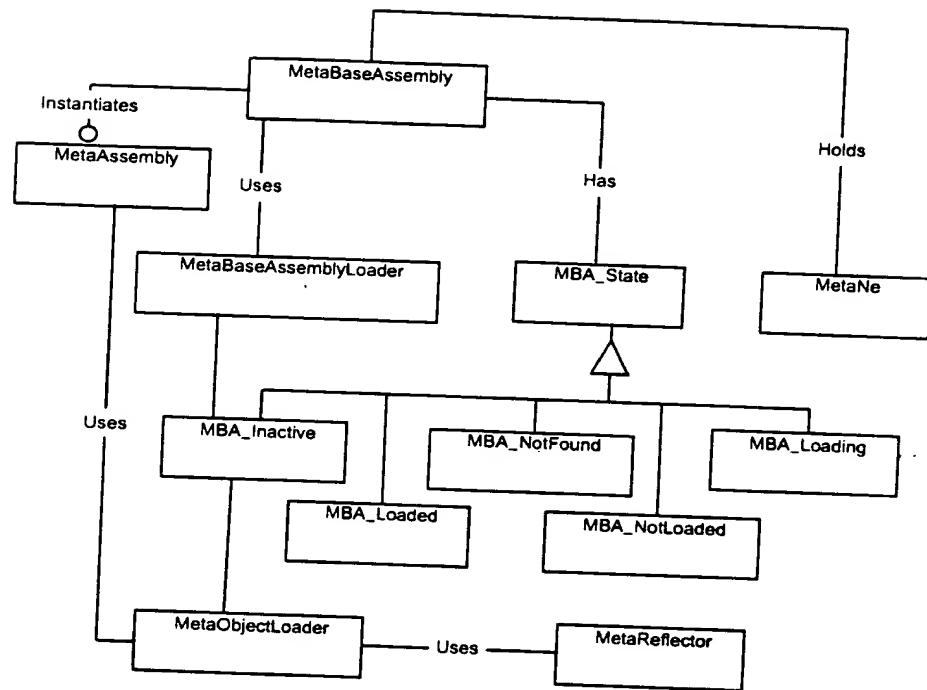


Figure 39

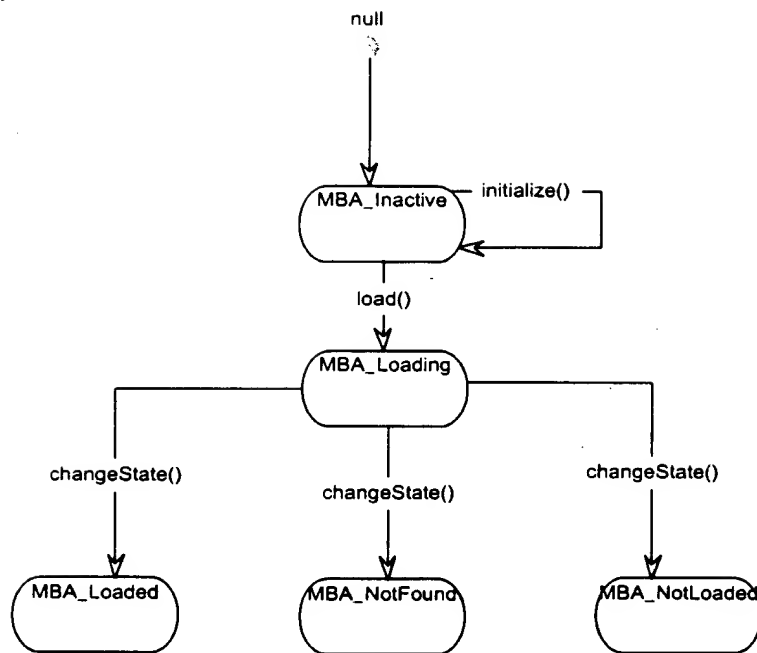


Figure 40

000000 000000 000000

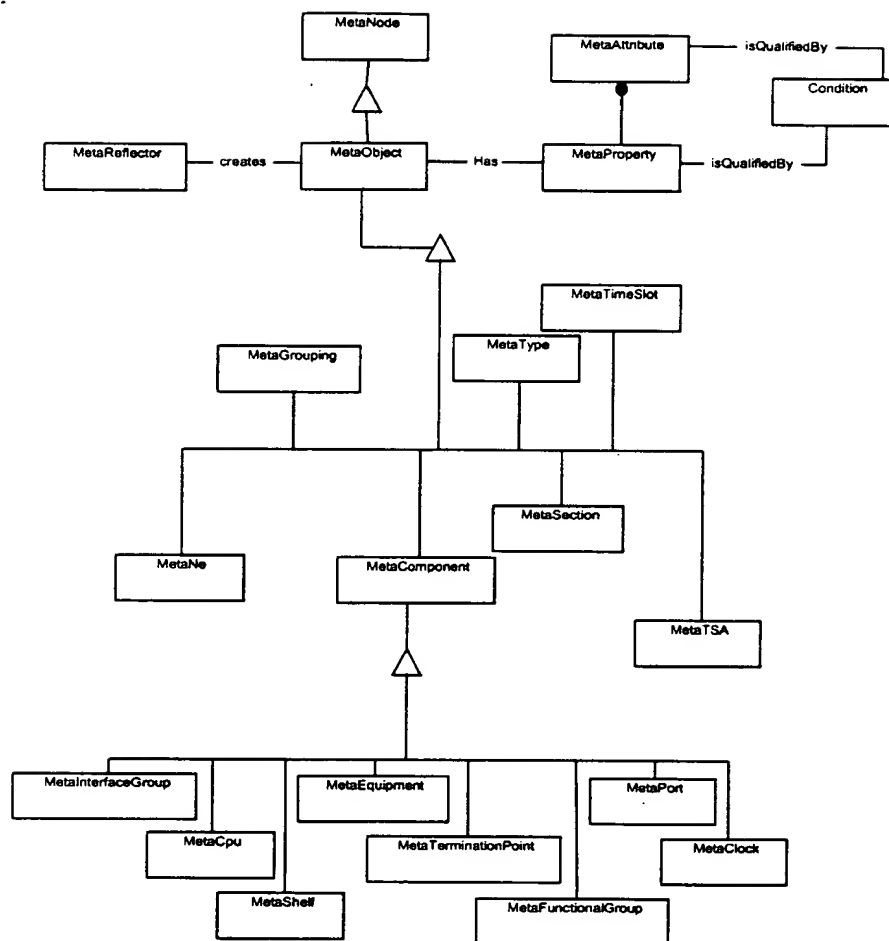


Figure 41

00550:6T50650

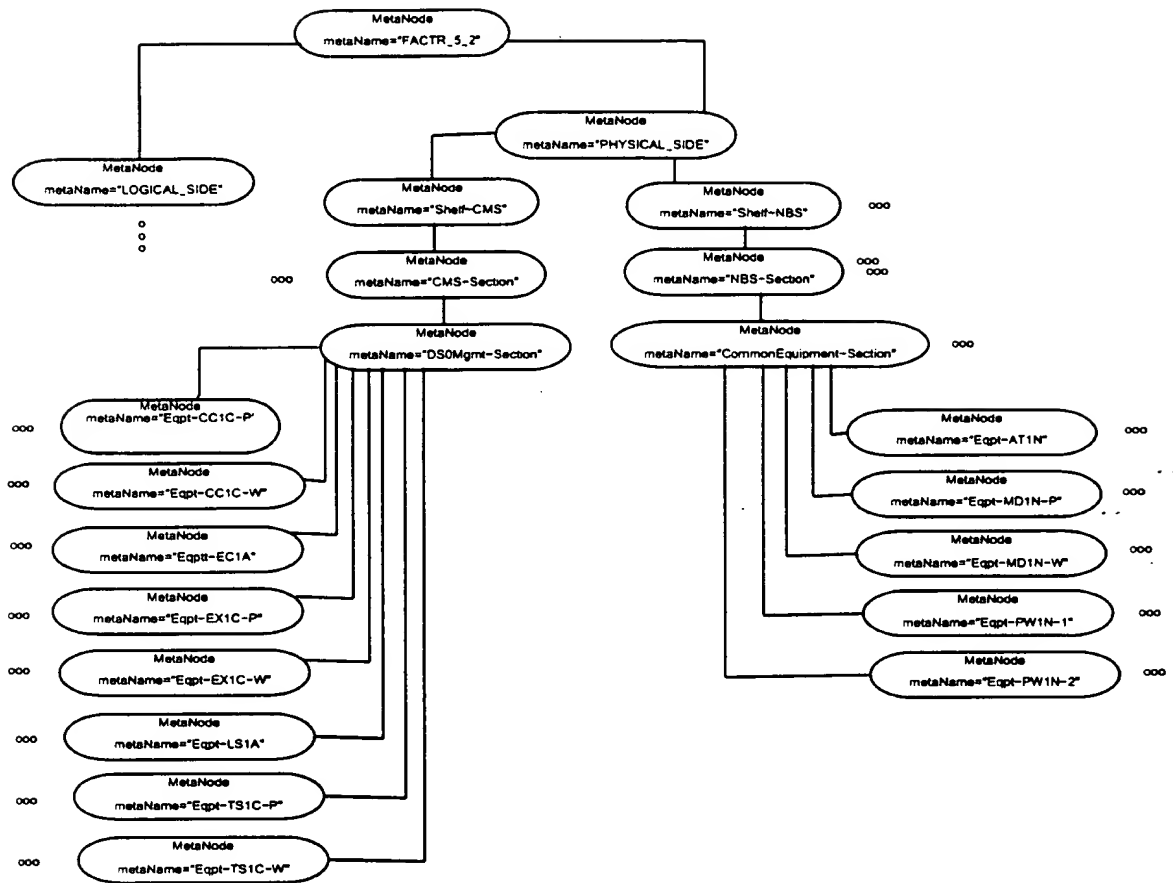


Figure 42